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TO : Commissioner for Patents
 COMPANY : USPTO
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 No of PAGES : 7 (including cover sheet)
 FROM : Joseph Fischer
 DATE : December 16, 2005
 RE : Serial Number 10/678,926; Filed 10/05/2003
 ATTY. DOCKET NO: 10509-051

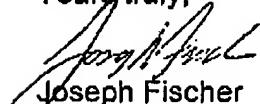
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Attached please find for entry into the above-referenced application:

- 1) Information Disclosure Statement Transmittal (2 pages); and
- 2) Form 1449 (4 pages).

Yours truly,


 Joseph Fischer
 Reg. #51,210

Certificate of Transmission

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 Kathy L. Tissie

Application No. 10/678,926

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Application of:

John W. Shiver et al. Group Art Unit: 1648

Serial No.: 10/678,926 Examiner: To Be Assigned

Filed: 10/05/2003

For: Synthetic HIV Gag Genes

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

- 1. Pursuant to 37 CFR 1.97(b)
(within 3 months of filing or prior to 1st Office Action)
- 2. Certification Pursuant to 37 CFR 1.97(c)
(before Final Office Action or Allowance)
- 3. Petition, Certification & Petition Fee Payment Pursuant to 37 CFR 1.97(d) (after
Final Office Action or Allowance but before issue fee payment)

Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following are submitted in the above-identified application in compliance with 37 CFR 1.97 & 1.98:

- 4. A list of documents on form PTO-1449 is enclosed herewith. All non-patent references have been cited and/or provided in one or more of the parent applications.

Application No. 10/678,926

This paper is submitted in accordance with:

5. 37 CFR 1.97(b): [within 3 months of filing or prior to 1st Office Action]

6. 37 CFR 1.97(c): [before Final office Action or Allowance, whichever is earlier; and

7. The required certification made in item 10 below; or

8. The \$180.00 fee specified in 37 CFR §1.17(p) for submission of this Information Disclosure Statement.

9. 37 CFR §1.97(d): [after Final Office Action or Allowance, but before issue fee payment]; and

a) This is a petition for consideration of the subject Information Disclosure Statement. The petition fee (\$180.00) required by 37 CFR 1.17(i)(1) is authorized in item 11 below. (Direct this letter to: "Attention: PETITIONS EXAMINER" and, if applicable, include batch locator information: e.g., "Allowed Files, Batch _____, Date of Allowance _____"), and

b) The required Certification is stated in item 10 below.

10. Certification

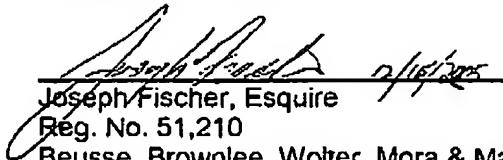
a) Each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement;

or

b) No item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing this document after making reasonable inquiry, was known to any individual designated in 37 CFR 1.56(c) more than three (3) months prior to the filing of this Statement.

11. Please charge all applicable fees associated with the submittal of this Information Disclosure Statement to Deposit Account No. _____.

Respectfully submitted,



Joseph Fischer, Esquire
Reg. No. 51,210

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PTO/SB/08A (08-03)

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Substitute for form 1449B/PTO				Complete If Known	
				Application Number	10/678,926
				Filing Date	10/05/2003
				First Named Inventor	John W. Shiver
				Art Unit	1648
				Examiner Name	Not yet assigned
Sheet	1	of	4	Attorney Docket Number	10509-051

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
01	US-5,462,872		10/31/1995	Jonak et al.	
02	US-5,788,464		07/28/1998	Seed	
03	US-5,795,737		08/18/1998	Seed et al.	
04	US-6,114,148		09/05/2000	Seed et al.	
05	US-6,584,312		03/18/2003	Shiver et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
06	WO 91/09869		07/1991			
07	EP 565794 A1		10/1993			
08	EP 345242 A2		12/1989			
09	WO 97/11086		03/1997			
10	WO 97/31115		08/1997			
11	WO 96/09378		03/1996			
12	WO 94/16737		08/1994			
13	WO 96/12207		03/1998			
14	WO 96/21356		07/1996			
15	WO 95/20680		08/1995			
16	JP 950007288		01/1995			

Examiner Signature		Date Considered	
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Substitute for form 1449B/PTO				Complete If Known	
				Application Number	10/678,826
				Filing Date	10/06/2003
				First Named Inventor	John W. Shiver
				Group Art Unit	1648
				Examiner Name	Not yet assigned
Sheet	2	of	4	Attorney Docket Number	10509-051

NON-PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
	17	Fahey, J. L. and Schooley, R., Status of immune-based therapies in HIV infection and AIDS, 1992, Clin. Exp. Immunol.; vol. 88; pp. 1-5.		
	18	Fox, Jeffrey L., No winners against AIDS, 1994, Bio/Technology; vol. 12; p. 128.		
	19	Haynes, Barton F.; et al., Update on the Issues of HIV Vaccine Development, 1996, Ann Med.; vol. 28; pp. 39-41.		
	20	Bagarazzi, M. L.; et al., Nucleic Acid-Based Vaccines as an Approach to Immunization Against Human Immunodeficiency Virus Type-1, 1998, Can. Top. Microbiol. Immunol.; vol. 226; pp. 107-143.		
	21	Shiver, John; et al., Cytotoxic T Lymphocyte and Helper T Cell Responses following HIV Polynucleotide Vaccination, 1995, Annals New York Academy of Sciences; vol. 772; pp. 198-208.		
	22	Wang, Ban; et al., DNA Inoculation Induces Neutralizing Immune Responses Against Human Immunodeficiency Virus Type 1 in Mice and Nonhuman Primates, 1993, DNA and Cell Biology; vol. 9; pp. 799-805.		
	23	Wang, Bin; et al., Vectors and Novel Vaccines: DNA Inoculation Induces Protective in Vivo Immune Responses against Cellular Challenge with HIV-1 Antigen-Expressing Cells, 1994, AIDS Research and Human Retroviruses; vol. 10; Supplement 2; pp. S35-S41.		
	24	Coney, Leslie; et al., Facilitated DNA Inoculation induces anti-HIV-1 immunity in vivo, 1994, Vaccine; vol. 12; No. 16; pp. 1545-1551.		

Examiner Signature		Date Considered	
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Substitute for form 1449B/PTO				Complete if Known	
				Application Number	10/678,926
				Filing Date	10/05/2003
				First Named Inventor	John W. Shiver
				Group Art Unit	1648
				Examiner Name	Not yet assigned
Sheet	3	of	4	Attorney Docket Number	10509-051

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	25	Fuller, Deborah Heydenburg and Maynes, Joel R., A Qualitative Progression in HIV Type 1 Glycoprotein 120-Specific Cytotoxic Cellular and Humoral Immune Responses in Mice Receiving a DNA-Based Glycoprotein 120 Vaccine, 1994, Aids Research and Human Retroviruses; vol. 10; No. 11; pp. 1433-1441.	
	26	Morikawa, Yuko; Barsøv, Eugene; and Jones, Ian, Legitimate and Illegitimate Cleavage of Human Immunodeficiency Virus Glycoproteins by Furin, 1993, Journal of Virology; vol. 67; pp. 3601-3604.	
	27	Lathe, R., Synthetic Oligonucleotide Probes Deduced from Amino Acid Sequence Data-Theoretical and Practical Considerations, 1985, J. Mol. Biol.; vol. 183; pp. 1-12.	
	28	Liu, Margaret A.; et al., Vaccination of Mice and Nonhuman Primates using HIV-Gene-Containing DNA, 1995, Anticancer. Chemother. Basel; Karger; vol. 48; pp. 100-104.	
	29	Andre, Stefanie, et al., Increased Immune Response Elicited by DNA Vaccination with a Synthetic gp120 Sequence with Optimized Codon Usage, 1998, Journal of Virology, pp. 1497-1503	
	30	Haas, Jurgen; et al., Codon usage limitation in the expression of HIV-1 envelope glycoprotein, 1996, Current Biology; vol. 6; No. 3; pp. 315-324.	
	31	Belshé, Robert B.; et al., Safety and Immunogenicity of a Fully Glycosylated Recombinant gp160 Human Immunodeficiency Virus Type 1 Vaccine in Subjects at Low Risk of Infection, 1993, Journal of Infectious Diseases; vol. 168; pp. 1387-1395.	
	32	Chou, Kuo-Chen and Zhang, Chun-Ting, Diagrammatization of Codon Usage in 339 Human Immunodeficiency Virus Proteins and Its Biological Implication, 1992, Aids Research and Human Retroviruses; vol. 8; No. 12; pp. 1967-1976	

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Substitute for form 1449B/PTO				Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)				Application Number	10/678,826
				Filing Date	10/05/2003
				First Named Inventor	John W. Shiver
				Group Art Unit	1648
				Examiner Name	Not yet assigned
Sheet	4	of	4	Attorney Docket Number	10509-051

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	33	Holler, Tod P.; et al., HIV1 integrase expressed in Escherichia coli from a synthetic gene, 1993, Gene; vol. 136; pp. 323-328.	
	34	Letvin, Norman L.; et al., Potent protective anti-HIV immune responses generated by bimodal HIV envelope RNA plus protein vaccination, 1997, Proc. Natl. Acad. Sci. USA; vol. 94; pp. 9378-9383.	
	35	Myers, Gerald; et al. (Edited by), Human Retroviruses and AIDS: A Compilation and Analysis of Nucleic Acid and Amino Acid Sequences, 1990, Published by Theoretical Biology and Biophysics Group T-10; pp. 1-A-74 thru 1-A-77.	
	36	Okuda, Kenji; et al., Induction of Potent Humoral and Cell-Mediated Immune Responses Following Direct Injection of DNA Encoding the HIV Type 1 env and rev Gene Products, 1995, AIDS Research and Human Retroviruses; vol. 11; No. 8; pp. 933-943.	
	37	Powell, Michael F.; and Newman, Mark J. (Edited by), Vaccine design: the subunit and adjuvant approach, 1995, Published by Plenum Press; pp. 21, 654.	
	38	Rinaldo, Charles; et al., High Levels of Anti-Human Immunodeficiency Virus Type 1 (HIV-1) Memory Cytotoxic T-Lymphocyte Activity and Low Viral Load Are Associated with Lack of Disease in HIV-1-Infected Long-Term Nonprogressors, 1995, Journal of Virology; vol. 69; No. 9; pp. 5838-5842.	
	39	Wang, Bin; et al., Gene inoculation generates immune responses against human immunodeficiency virus type 1, 1993, Proc. Natl. Acad. Sci. USA; vol. 90; pp. 4156-4160.	

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